

## CLAIMS

1. An biodegradable barrier network, comprising:
  - a) a cationic polypeptide,
  - 5 b) an anionic polypeptide and
  - c) a pharmaceutically acceptable carrier.
2. The biodegradable barrier network according to claim 1, wherein a) is selected from the group  
10 consisting of amino acid residues R, H, K, synthetic and semisynthetic variants and mixtures thereof.
3. The biodegradable barrier network according to claim 2, wherein b) is selected from the group  
15 consisting of the amino acid residues D, E, synthetic and semisynthetic variants and mixtures thereof.
4. The biodegradable barrier network according to any of the preceding claims, wherein the amino acid  
20 residues within at least one of the polypeptides comprise amino acid residues of the same type.
5. The biodegradable barrier network according to any of the preceding claims, wherein at least one of the polypeptides is linked to one or more amino  
25 acid residues, other peptides or other substances.
6. The biodegradable barrier network according to the preceding claims, wherein at least one of the peptides is modified by amidation, esterification, acylation, acetylation, PEGylation or alkylation.
- 30 7. The biodegradable network according to any of the preceding claims, wherein the peptides have a size of at least 5.000 Da, such as from about 5.000 to about 50.000 Da.
8. The biodegradable barrier network according to any  
35 of the preceding claims, wherein the biodegradable

network comprises a pharmaceutical acceptable carrier, such as a diluent or buffer.

9. The biodegradable barrier network according to any of the preceding claims, wherein the biodegradable network comprises a therapeutic agent such as antimicrobial agents, antiinflammatory agents, cleaning agents, antioxidants, apoptosis modulators, healing agents, fibrogenesis inhibitors, antitumor agents and antibleeding agents.

10. The biodegradable barrier network according to claim 9, wherein the therapeutic agent is selected from the group comprising of penicillins, cephalosporins, carbacephems, tetracyclines, macrolides, iodine, silver, copper, clorhexidine, acetylsalicylic acid, proteolytic enzymes, vitamins, glutathione, folic acid, curcumin, resveratrol, epigallocatechin, anthocyanidins, glucocorticosteroids, insulin, dexamethasone, carotenoids, linoleic and conjugated-linoleic acids, melatonin, isothiocyanates, shikonin, solamargine, perifosine, deoxynivalenol, carboxyamido-triazole (CAI), histone deacetylase inhibitors, growth factors, insulin, vitamin E, retinoic acid, herbal components norepinephrine, gelatin, collagen and oxidized cellulose.

11. An applicator comprising:

a) a cationic polypeptide

and a pharmaceutically acceptable carrier;

b) an anionic polypeptide and a pharmaceutically acceptable carrier;

said cationic polypeptide and anionic polypeptide being separated from each other by a separator.

12. The applicator according to claim 11, wherein the applicator is selected from the group comprising of syringes, one or multi-component sprays, nebulators, plasters, catheters, adhesives, implants and bandages.
13. The applicator according to claim 11-12, wherein the separator is a gelled aqueous solution or a membrane.
14. The applicator according to claims 11-13, wherein the polypeptides are as defined by claims 2-10.
15. A kit comprising
- a) a cationic polypeptide and a pharmaceutically acceptable carrier
  - b) an anionic polypeptide and a pharmaceutically acceptable carrier and
  - c) means for administering said cationic and anionic polypeptide.
16. The kit according to claim 15, wherein the polypeptides are as defined by claims 2-10.
17. The kit according to claims 15-16, wherein the means is selected from the group comprising of syringes, plasters, catheters, adhesives, implants, bandages, one or multi-component sprays, and nebulators.
18. The applicator according to claims 11-14 or the kit according to claims 15-17, comprising a therapeutic agent such as antimicrobial agents, antiinflammatory agents, cleaning agents, antioxidants, apoptosis modulators, healing agents, fibrogenesis inhibitors, antitumor agents and antibleeding agents.
19. The applicator or the kit according to claim 18, wherein the therapeutic agent is selected from the group comprising of penicillins, cephalosporins, carbacephems, tetracyclines, macrolides, iodine,

silver, copper, clorhexidine, acetylsalicylic  
acid, proteolytic enzymes, vitamins, glutathione,  
folic acid, curcumin, resveratrol,  
epigallocatechin, anthocyanidins,  
5 glucocorticosteroids, insulin, dexamethasone,  
carotenoids, linoleic and conjugated-linoleic  
acids, melatonin, isothiocyanates, shikonin,  
solamargine, perifosine, deoxynivalenol,  
carboxyamido-triazole (CAI), histone deacetylase  
10 inhibitors, growth factors, insulin, vitamin E,  
retinoic acid, herbal components norepinephrine,  
gelatin, collagen and oxidized cellulose.

20. The applicator or the kit according to claims 18-  
15 19, wherein the therapeutic agent is separated  
from the two polypeptides or mixed with one or  
both of the polypeptides.

21. Use of the applicator or the kit according to  
claims 11-20 in therapy, such as in medicine,  
20 veterinary medicine and horticulture.

22. A method of treating a mammal having an injury,  
comprising use of the applicator or the kit  
according to any of claims 11-21 for creating the  
biodegradable barrier network according to any of  
25 claims 1-10.